

Spring 4-25-2012

# STEM Future Dallas

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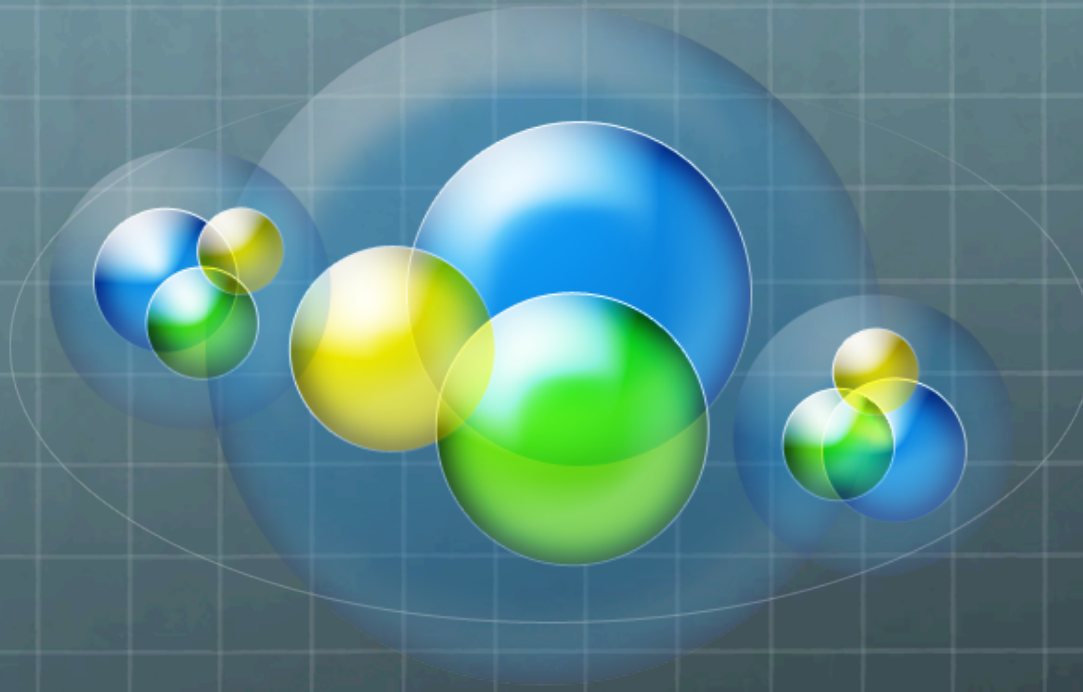
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# STEM Future Dallas

Big iDeas Symposium  
Southern Methodist University  
April 25, 2012

# STEM Education

- What is it?
  - STEM: Science, Technology, Engineering and Mathematics
- Careers in STEM fields are diverse and crucial to the economy
- STEM careers and the education to obtain them are challenging but rewarding

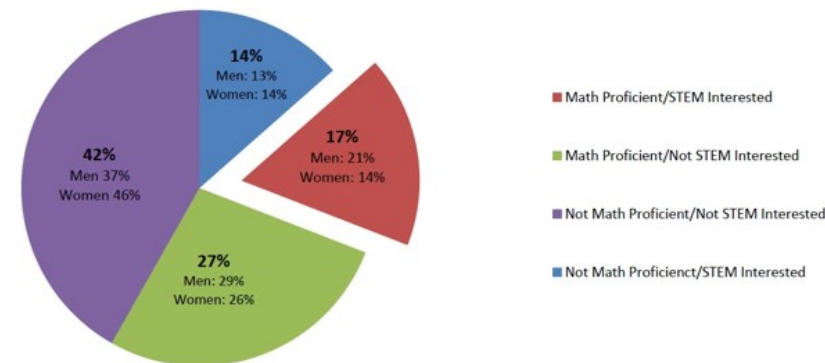


Above: Scientists are often not fully trained until after they are 8 years old.

# STEM Education

- 🌐 Okay, it's important. But what's the problem?
- 🌐 American students are well behind other first-world countries in science and math.
- 🌐 Below the median in both categories.
- 🌐 High-school student interest and math proficiency are dwindling.
- 🌐 Bottom line: America is behind.

Figure 1: Too few 12th grade students interested in STEM and proficient in math

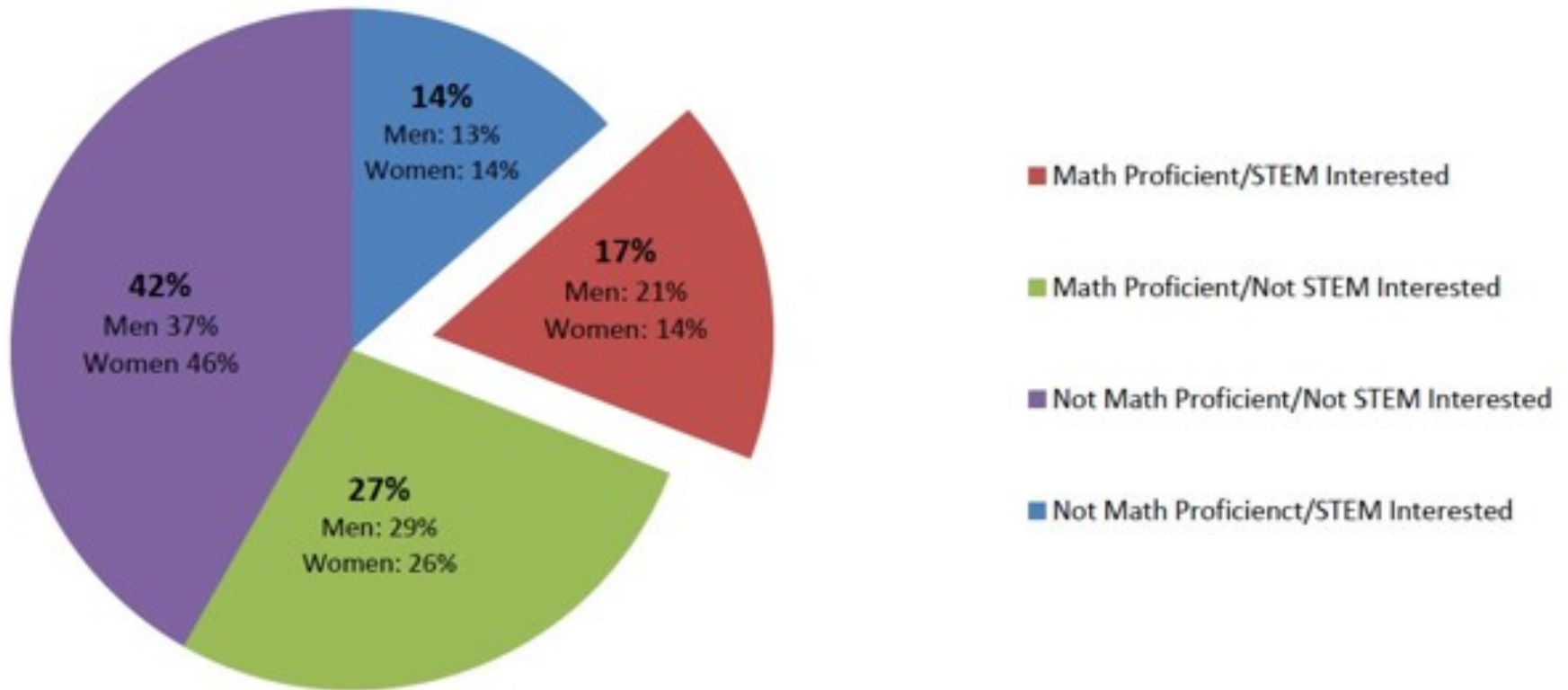


Above: Obligatory pie chart. No wonder we got a grant.



# STEM Education

Figure 1: Too few 12th grade students interested in STEM and proficient in math



Credit to The Washington Post, “Lack of interest and aptitude keeps students out of STEM majors.”

# Our solution

**Examine the problem from a smaller scale: Dallas as a microcosm for the US.**

- 🌐 **Gain a “student’s perspective” on STEM careers.**
- 🌐 **Interview experts and educators from the different sectors.**
- 🌐 **Compile news and information in a concise, user-friendly, frequently updated website.**



Above: It is a perfect microcosm because it's the most American.

# Our solution

**Goal: Gain a “student’s perspective” on STEM careers.**

- 🌐 **Questionnaires and interviews**
  - 🌐 **Undergraduate students: SMU**
    - 🌐 **STEM majors, but particular interest to business majors**
  - 🌐 **Secondary (high school) students: DISD, Highland Park**

**While primary education is a crucial concern as well, we will constrain our focus to these two groups.**



Above: College freshmen are a rich repository of wisdom and information.



# Our solution

**Goal: Interview experts and educators from the different sectors.**

- 🌐 **Audio and video recorded interviews for multimedia and website purposes**
- 🌐 **Gain perspectives from different areas of the industry; views of education, student interest, and career**

**Targeted groups: Texas Instruments, UT Southwestern Medical Center, Teach for America**



# Our solution

**Goal: Compile news and information in a concise, user-friendly, frequently updated website.**

- 🌐 **Collect relevant news stories and research articles, and sort according to particular issue**
- 🌐 **Present our own findings in an intuitive manner**
- 🌐 **Create an interactive community component allowing for comments and participation from visitors**





# Our team

- **Jacob Fleming**
  - Major: Biological Sciences, Chemistry
  - Minor: Philosophy
- **Jessie Hart**
  - Major: Environmental Science
  - Minor: Psychology, Education
- **Joey Ottolenghi**
  - Major: Psychology
  - Minor: Biology, Chemistry
- **Alex Saucedo**
  - Major: Electrical Engineering (Biomedical Specialization)
  - Minor: Chemistry, Mathematics



Above: There is no “STEM” in “TEAM”. But there is  $\frac{3}{4}$  of it, so it’s pretty close.

# So far...

- Central website and blog:  
[stemfuturesdallas.blogspot.com](http://stemfuturesdallas.blogspot.com)
  - Domain coming soon!
  - Blog posts on our project and current issues
- Facebook: [facebook.com/stemdallas](https://facebook.com/stemdallas)
  - Visibility of project to SMU students and others
- Twitter: [@STEMDallas](https://twitter.com/STEMDallas)
  - Frequent news updates pertaining to STEM issues and our project



# Future of the project

- 🌐 Launch full website and domain
- 🌐 Update social components consistency
- 🌐 Survey and interview SMU students
  - 🌐 Fall: Survey and interview high school students
- 🌐 Summer: Gain perspectives from industry experts





# Summer

- **Jacob: UT Southwestern Research Fellow**
  - Biomedical research and health care
- **Jessie: Breakthrough Houston: 7<sup>th</sup> Grade Life Sciences**
  - Primary education in STEM
- **Alex: Texas Instruments Applications Engineer**
  - Engineering and industry
- **Joey: SMU-in-Italy Study Abroad**
  - Living the dream (and designing surveys)
  - Living with spotty Italian WiFi

# STEM Future Dallas



<http://stemfuturesdallas.blogspot.com>






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-  **SMU Big iDeas Program**
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# Welcome to the future...



## STEM Future. ... Dallas.

**Science!**

**Synergy!**

**Results!**